

Foreword

I clearly remember my introduction to the Washington Monument commemorative stones. I took the elevator to the top of the monument, opened the stairwell door and began my descent. My discovery of “the stones” was nothing less than a feeling of amazement. When asked if I wanted to work on their cleaning and conservation, I responded with an enthusiastic “yes.” That was in 1997. I did not know how lengthy a project I had ahead of me, nor did I know what rewards the project would bring.

Working on the project was a unique opportunity, for which I am grateful. It is my hope that this report will be useful for the interpretation of the commemorative stones for many years to come. It is also my hope that this report will inspire others to continue with my research and to make their own contribution to the historical record of the stones.

Acknowledgements

Many people contributed to this project and deserve recognition and heartfelt thanks. Naomi Kroll, Architectural Conservator (Northeast Cultural Resources Center, Building Conservation Branch), worked on all aspects from beginning to end and helped enormously with a critical review of this report; Beth Edelstein, Lara Kaplan, and Carolyn Lockwood, Architectural Technicians, (Northeast Cultural Resources Center, Building Conservation Branch), assisted with research and conservation treatments. Dan Szwed, Construction Manager, Alpha Corporation, provided copies of documents from the Society for the Preservation of New England Antiquities. Rebecca Stevens, Regional Architect and Gary Scott, Regional Historian, National Capital Region, generously offered their files for perusal. Cindy Chang and Tina March, Consultants, digitized images and formatted them for this report. John Lockwood, Park Ranger, has spent untold hours in libraries and archives researching the history of the Washington Monument and the commemorative stones; his photocopies of nineteenth-century articles have greatly augmented the research carried out for this project. Finally, Steve Lorenzetti, Chief of Resource Management Division, National Capital Parks, Central, provided the guidance and steadfast encouragement that enabled the project’s successful completion.

I. Introduction

A. Project Summary

In preparation for the new millennium, the Washington Monument was the subject of an extensive restoration.¹ The exterior of the monument was cleaned, masonry repaired, joints pointed, and the lightening-protection system upgraded. On the interior, new heating and cooling systems were installed, the elevator controls and cab were replaced, and the top visitor levels were remodeled. As part of the restoration, the one hundred and ninety-three commemorative stone tablets set into the interior walls of the monument were cataloged and cleaned; additional conservation treatments were carried out as necessary. The entire project—exterior and interior—is called the “2000 Restoration” in this report.

The 2000 Restoration was planned and managed by the Denver Service Center. The Northeast Cultural Resources Center, Building Conservation Branch (now the Northeast Regional Office, Architectural Preservation Division, APD) carried out the work on the commemorative stone tablets over a five-year period (1997-2001). The most commonly used term to describe the collection of tablets is the “commemorative stones” and this is the term that will be used in this report.²

In order to best understand the condition of the commemorative stones, necessary for making informed conservation treatment decisions, an extensive amount of research was carried out. Libraries and archives provided information on the technical history of the stones which included descriptions of materials, original appearance, and installation in the monument. In addition to historical documents, the stones themselves provided information, often verifying documents or answering questions posed by a lack of documents.

This report presents a technical history of the commemorative stones and makes recommendations for further research. Following the history and recommendations is a catalog of the stones, the most thorough and extensive to date. There were a number of stones donated to the monument but never installed; a catalog of these stones is also included.

B. Description of the Commemorative Stones

One hundred and ninety-three unique stone tablets are set into interior walls of the Washington Monument,³ donated to the monument in honor of the nation’s first president, George Washington. Most of the stones date from 1849 to 1855. Sixteen stones date to the twentieth century. The last stone was installed in 2000.⁴ There is a stone from every

¹ The project was funded by a ten-million-dollar public-private partnership with both congressionally appropriated funds and private donations.

² The terms “memorial stones” and “presented stones” have also been used in the past.

³ There are actually one hundred and ninety-two stone tablets; Michigan is a block of copper ore.

⁴ Carthago, donated in 1855, had been mislaid for a century before it was discovered at the base of the elevator shaft in 1951.

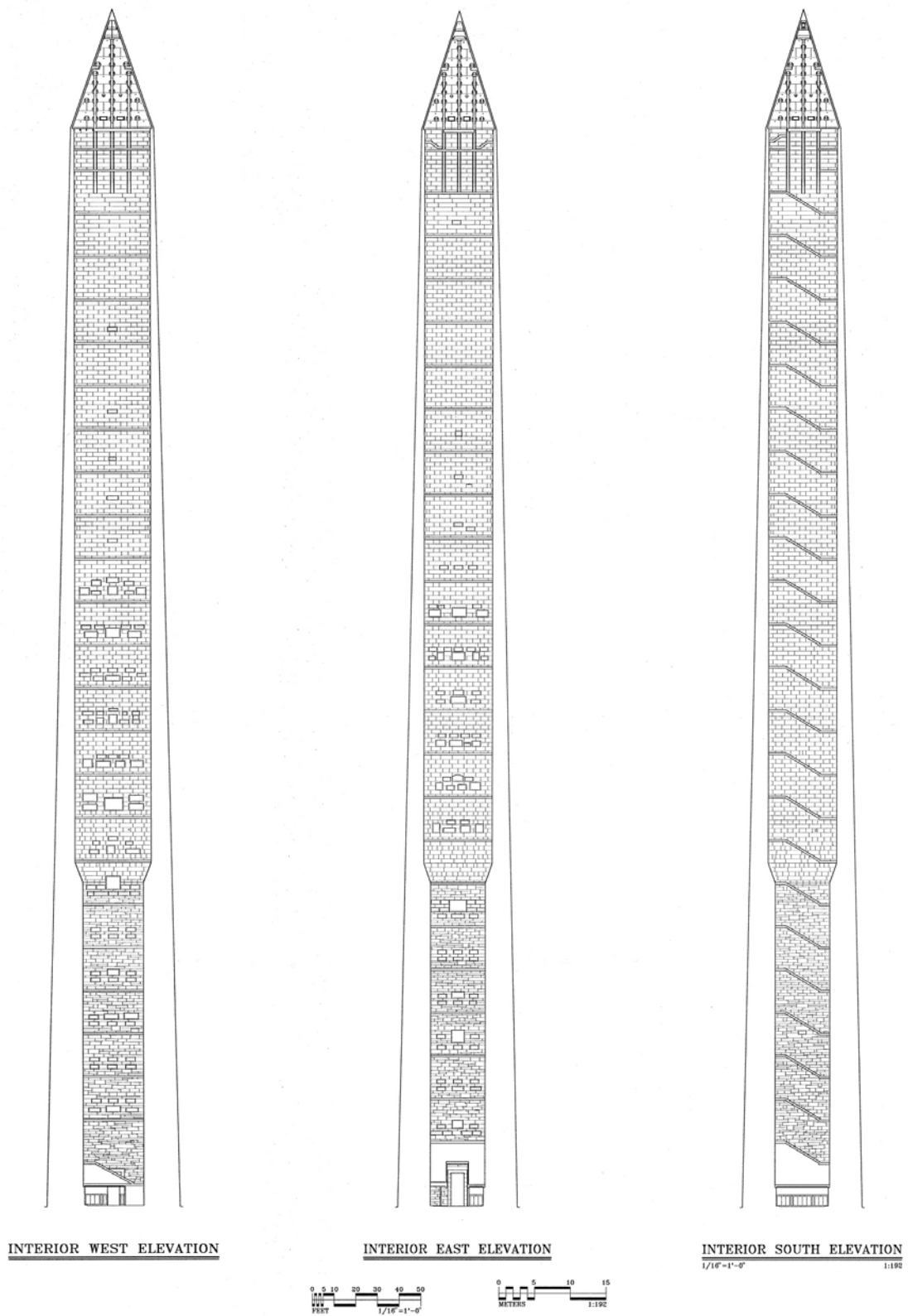


Figure 1. Interior west elevation, east elevation, and south elevation. [Composite image from Sheets 22, 28, and 25, Historic American Buildings Survey, HABS DC-428; Prints and Photographs Division, LOC.]

state, and also from fraternal and community organizations, cities and towns, foreign countries, and individuals. Stone types include granite, marble, limestone, sandstone, soapstone, and jade. Some stones are simply cut with incised text while others are carved in relief with ornament and figures or, in some cases, are fitted with bronze and silver plaques and letters. The stones range in size from 2-by-2 feet to 6-by-8 feet and are placed at heights from 3 feet to 16 feet above each landing of the stair case; one is placed above the stairs. Landings—or levels—are marked by their height (e.g., 30-ft. level, 180-ft. level) (Figures 1 and 2).

C. Administrative and Construction History of the Washington Monument

The history of the design and construction of the Washington Monument is long and complex, and has been well summarized in the past.⁵ A brief recounting of this history is presented here.



Figure 2. 160-ft. level, 1994. [Historic American Buildings Survey, HABS DC, WASH, 2-102; Prints and Photographs Division, LOC.]

The Washington National Monument Society was founded in 1833, as a private association, to fund and construct a monument to the memory of the nation's first president. In 1836, American artists were offered the opportunity to submit designs for a monument; Robert Mills (1781-1855) won the competition with a plan for a 500-foot tall obelisk, surrounded by a circular colonnade that was surmounted by equestrian statuary. Congress authorized the Society to construct this monument on public grounds and in the spring of 1848, work commenced on the foundation. On July 4, the cornerstone for the obelisk was laid. William Dougherty, Superintendent (d.1867⁶), oversaw construction for the Society.

By 1854, when the monument was 150 feet high, the Society had run out of funds and the means to raise more; the nation was in the midst of an economic recession and the Society itself was suffering from internal dissent. Early in 1855, the Know Nothing Party, spurred on by the donation of a stone from Pope Pius IX, gained control of the Society and continued

⁵ See: Frederick L. Harvey, compiler, "History of the Washington National Monument and Washington National Monument Society," 57th Congress, 2d Session, Senate Document No. 224, Washington: Government Printing Office, 1903; *The Washington Monument*, Washington: The Society of American Military Engineers, 1923; George J. Olszewski, "A History of the Washington Monument, 1844-1968, Washington, D.C.," National Park Service, Office of History and Historic Architecture, Eastern Service Center, Washington, D.C., April 1971; and Louis Torres, "To the immortal name and memory of George Washington" *The United States Army Corps of Engineers and the Construction of the Washington Monument*, Washington: U.S. Government Printing Office, 1984.

⁶ *The Evening Star*, November 18, 1867.

with the construction of the monument.⁷ During the next three years, about four feet were added to the shaft using blocks of stone earlier rejected and still on the site. Unable to raise the funds necessary to complete more than this and with their own party in disarray, construction on the monument was halted and the Know Nothing Party relinquished their control of the Society. The monument stood in its unfinished state for the following twenty years (Figure 3).

By the 1870s, the monument was still unfinished and the Society still did not have the funds necessary for its completion. On August 2, 1876, President Ulysses S. Grant approved an act stipulating that the Society would cede the unfinished monument to the federal government and authorizing the appointment of a Joint Commission on the Construction of the Washington National Monument to direct and supervise construction. The Society could continue to provide advice on construction and solicit funds. The act also called for an inspection of the monument's foundation to determine its loading capacity.⁸

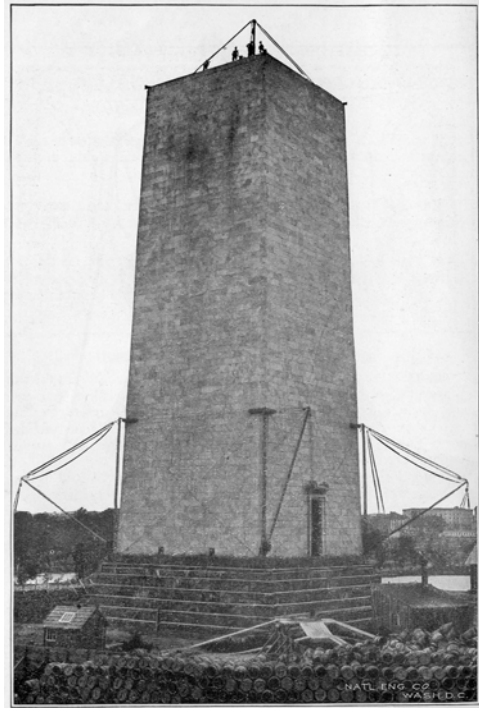


Figure 3. Lower portion of the monument, 1878. [Ina Capitola Emery, ed. and pub., *The Washington Monument*, 1909.]

Work on the monument was resumed in 1878, under the direction of Lieutenant Colonel Thomas Lincoln Casey, US Army Corps of Engineers (1831-1896). Casey began by enlarging and strengthening the monument's foundation. In 1880, work on the obelisk was resumed; the structural design of the shaft was changed and the proportions of the pyramidion were refigured. The grand colonnade envisioned by Mills was never built. On December 6, 1884 the capstone was set in place and the monument was dedicated on February 21, 1885 (Figure 4). It was open to the public in April of 1886, and was officially declared open on October 9, 1888.

Once the monument had opened to the public, it was placed under the jurisdiction of the Office of Public Buildings and Grounds. In the 1920s, this office became the Office of Public Buildings and Public Parks of the National Capital. In 1933, responsibility for the monument was transferred to the National Park Service.

⁷ For information on the Pope's Stone, see Section V, "Catalog of the Lost, Stolen, Never Sent, or Otherwise Missing Commemorative Stones."

⁸ Some documents refer to the "Joint Commission on the Construction of the Washington National Monument" and other documents refer to the "Joint Commission for the Completion of the Washington Monument." Torres uses the former name and for this reason, this is the name used in this report.

D. Research Goals and Sources of Information

Research was carried out in Washington, D.C. libraries and archives to obtain information on the commemorative stones that would aid in conservation treatment decisions. Information was sought regarding the original appearance of stones as well as their transportation to the site, storage on the site, and installation in the monument. Research was carried out on a non-continuous basis, as time and circumstances permitted.

The greatest amount of material on the stones was found in the National Archives and Records Administration, Washington, DC (NAB, Record Group 42, Records of the Office of Public Buildings and Public Parks of the National Capital). Documents in these archives include Casey's reports, proceedings of the Joint Commission, newspaper clippings, programs from stone unveiling ceremonies, and correspondence collected since the monument's completion. Research was also carried out in the Library of Congress, Rare Book Room and Prints and Photographs Division (LOC); the Martin Luther King Jr. Memorial Library, Washingtoniana Collection (MLK); and the National Society Daughters of the American Revolution Archives.



Figure 4. Completed monument, c.1900.
[Postcard; APD.]

Two National Park Service collections were examined for this project. The National Capital Parks, Central park ranger reference library (NACC, located in the Jefferson Memorial) has three sets of photographs (dating to 1957, 1974, and 1980), and scrapbooks and files of newspaper clippings and photocopied documents. The National Capital Region, Offices of the Regional Historian and Regional Architect (NCR), have files of clippings and correspondence, as well as a collection of drawings from the 1850s.

Period newspapers were perused for articles on the Washington Monument. Newspapers were found in libraries, archives, and in Web databases. The auction Web site eBay occasionally sells nineteenth-century newspapers or individual pages of nineteenth-century newspapers that reference the Washington Monument. Several of these items were purchased for this project.

The research effort was extensive but by no means exhaustive. More material may possibly be found in the collections already examined (missed or overlooked in this study). Material exists in other Washington collections and several private libraries.⁹ Information on individual stones will undoubtedly be found in state and local libraries and archives. The National Capital Region's Museum Resource Center (MCRE) has a collection of

⁹ See bibliography in Torres.

Washington Monument documents that should be examined; unfortunately the collection was not available for viewing at the time of this project.

E. Lists, Catalogs, and Photographic Records of the Commemorative Stones

The earliest pictorial record of the commemorative stones was made between 1849 and 1854. As the stones arrived in Washington, Roger W. Wilcox cataloged them with drawings and short descriptions.¹⁰ The exact format and contents of his document are not known; all that exists now is a set of one hundred ink drawings that have been pasted onto sheets of 5-by-7¾-inch lined paper. The drawings are skillfully drafted and finely detailed, and provide accurate renderings of the stones

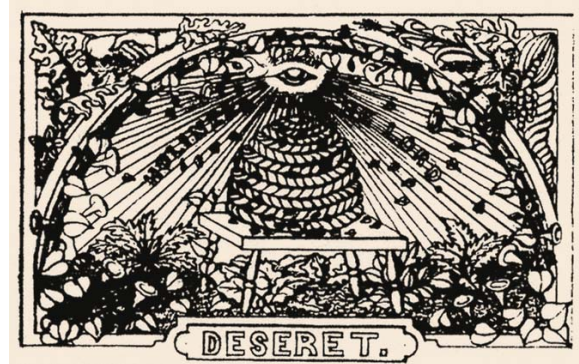


Figure 5. Roger W. Wilcox drawing of Deseret.

(Figure 5). In addition to the drawings, there are eighty-one descriptive notes for the stones with information on size, material, and finish. Not all of the drawings are accompanied by notes and not all of the notes are accompanied by drawings. The notes appear to have been transcribed from original descriptions as the sentence structure and word use is of a mid-nineteenth century character, while the paper post-dates this time. The cover page is extant and measures 5½ by 7¼ inches. The sheets, with their drawings and notes, are pasted onto yellow legal-size sheets and housed in a file folder.¹¹

During the 1870s and 1880s, several lists of the stones were made as part of the second period of the monument's construction. The first list was made in 1872 in a report to congress by the Washington National Monument Office.¹² It is not known if the list was made directly from the stones or from an existing list; in 1872 it may have been difficult to access all of the stones within the partially constructed shaft, and with good light. Two lists date to 1885 and provide the name of each stone with notes on material, dimension, and in some cases, condition or appearance. In 1887, a similar list was made of those stones remaining in storage. A final list was made in 1888.¹³

¹⁰ R.W. Wilcox, "Facsimiles and Descriptions of the Blocks Contributed to the Washington National Monument," c.1849-54; Office of the Regional Historian, NCR.

¹¹ Correspondence from 1938 discusses the proposed sale of this document; it may have been at this time that the document was disassembled and the notes transcribed. [Entry 439, RG 42, NAB.]

¹² "The Report of Committee on District of Columbia in Relation to the Completion of the Washington National Monument," Washington National Monument Office, January 22, 1872, House of Representatives, Report No. 48.

¹³ "Schedule of Memorial Stones now set in the Interior Walls of the Washington Monument prior to the 16th day of March 1885"; "Schedule of Memorial Stone[s] in Stone House at Washington Monument, Mch. 16/85."; "List of Presented Stones Remaining in Lapadarium Dec 9/87;" and "List of Memorial Stone in the Monument . . . Nov 20/88;" Entry 440, RG 42, NAB.

In 1880, Charles Gedney compiled a scrapbook of ink drawings.¹⁴ Each drawing is accompanied by text giving information on material, dimension, location in monument or storage, and an occasional note describing surface finish or condition (Figure 6). The drawings were obviously made quickly and there are countless inaccuracies in text, image, material, and dimension.



Figure 6. Charles Gedney drawing of Deseret.

In 1903, Frederick L. Harvey's "History of the Washington National Monument and Washington National Monument Society" was published by the Government Printing Office. It contains a list of the stones, arranged by level, with their inscriptions. A 1909 guidebook gives the same information, as well as a few short condition observations and five drawings.¹⁵ The Society of American Military Engineers guidebook, published in 1923, provides a short history of the monument's construction and lists the stones and their inscriptions.

In 1957, Josephine D. Allen, Park Archivist, National Capital Parks, made the first known photographic record of the stones using 35mm black-and-white film (Figure 7).¹⁶ Scattered copies of her correspondence in different collections suggest that she also spent some effort in researching the stones. It is not known if and where her entire correspondence exists.



Figure 7. Josephine D. Allen photograph of Deseret.

Six years later, in 1963, the Museum of American Art hired Michael Richman to produce a catalog of the stones. Richman, then a recent college graduate and now an independent art historian, recorded each stone's material, dimension, inscription, and condition.¹⁷ Information on the stones' carvers, procurement, transport, and other historical facts which was found during his research in the Lincoln Library was included in the catalog.¹⁸ There are numerous inaccuracies in his descriptions of the stones, due in part to

¹⁴ Charles Gedney, "Sketches of Tablets Contributed to the Washington National Monument," February 17, 1880; Toner Collection, Rare Book Room, LOC.

¹⁵ Ina Capitola Emery, ed. and pub., *The Washington Monument*, 1909.

¹⁶ Memorandum, Josephine D. Allen, Park Archivist, to Chief, Division of Public Use and Interpretation, "Memorial Stone Blocks in the Washington Monument Photographed," Washington, D.C., August 21, 1957; NACC.

¹⁷ Michael Richman, Survey of the commemorative stones, typewritten document, 1963; NACC.

¹⁸ Richman refers to the Lincoln Library in his catalog. This library, or collection, was located at Ford's Theater National Historic Site but is no longer there; the current location of this collection is not known. It is possible that it was moved to the MCRE.

the fact that fieldwork was carried out without a ladder.¹⁹ Despite the inaccuracies, this catalog was enormously useful in providing a base for the catalog created for this project.

In 1974, a set of high-quality 35-mm black-and-white photographs was made. The date of this set is based on a one-page photocopy of an introduction to a talk given by Paul Goeldner, Chief, Historic Resource Services National Capital Region. He states: “Captioned photos represent conditions in 1974.”²⁰ While the existing set does not have captions, it is highly unlikely that two sets of photographs would have been made in the 1970s; photographing all of the stones is an arduous task and not inexpensive.

Between 1978 and 1980, many of the stones were cleaned and selected sculptural elements replaced. Following this work, another set of 35mm black-and-white photographs was made.²¹ These images are overexposed and somewhat grainy, indicating that they were not made by a professional or well-practiced photographer.

For the 2000 Restoration, all stones were photographed before and after conservation treatment with 35-mm color-slide film. Slides were then digitized for inclusion in this report.²²

II. Technical History

A. History of the Commemorative Stones’ Fabrication, Delivery, and Storage

The first commemorative stones were donated to the monument in 1849. The original purpose for these stones seems to have been two-fold. One was representative, whereby all “States of the Union [were to be] properly represented” with a block of native stone and the state’s name carved across the face.²³ The second purpose was to aid in fundraising. The Washington National Monument Society initially planned to accept stones along with a cash donation. While records show that some stones did come with this extra donation, for the most part, it seems that stones were delivered without it.

The Society provided instructions to donors to make their commemorative stones 4 feet long, 2 feet high, and 12 to 18 inches in depth; stones were to be quarried locally and carved with the name of the state or donor organization.²⁴ The stones’ variety in inscription and dimension attests to the fact that these directions were not always followed.

¹⁹ Conversation with Michael Richman, Washington, DC, November 30, 2000.

²⁰ Paul Goeldner, Chief, Historic Resource Services National Capital Region, “Washington’s Birthday 1979,” photocopy of document and photographs, NACC. Note: In c.1968, the stone from Florida was replaced and this replacement stone is included in the collection. From 1978 to 1980, a restoration project for the stones was carried out; these photographs pre-date this work.

²¹ The photographs are in the collection of the NACC.

²² Full sets of slides are in the collections of NACC and the APD, New York City field office.

²³ Harvey, p. 48.

²⁴ Harvey, p. 48. The *Brooklyn Daily Eagle* reported the following from the *Washington Whig*: “Should the States be disposed to furnish stones, they must be of the following dimensions, viz: four feet long, two feet high, and one foot and six inches bed, with a front bevel of a quarter of an inch to the foot.” [*Brooklyn Daily Eagle*, May 9, 1849.]

Sixty-six names of carvers, sculptors, architects, makers, artists, designers, quarry owners, and one foundry appear on the stones themselves or are documented in newspaper articles, Washington National Monument Society records, or the 1963 catalog. In some cases, more than one name appears on a stone. The names of the carvers are unknown by sculpture historians today, with the one exception of Robert Eberhard Schmidt von der Launitz (1806-1870), sculptor of Corporation of the City of New York.

Twenty-four carvers inscribed the name of their city or town alongside their own name, indicating that these stones were carved locally and then shipped to Washington. At least seven stones were sent as plain blocks that were then carved in Washington.²⁵

Stones were shipped by rail, ship, and ox team.²⁶ Information on packing and delivery is found in letters and bills of lading.

As stones were delivered to the site, they were unpacked, cataloged, and placed in storage. Up until 1853 (and maybe as late as 1856), stones were “deposited in sheds near the monument.”²⁷ Sometime between these dates, but probably in either 1853 or 1854, the Lapidarium was constructed: a long, one-story building (about 20 by 100 feet) on the monument grounds used both for storage and as a gallery with stones set in rows for viewing (Figures 8 and 9).²⁸ Stones that had not been installed by 1855 (there are eighty on the 1885 list) remained in the Lapidarium until the monument’s shaft had been completed.

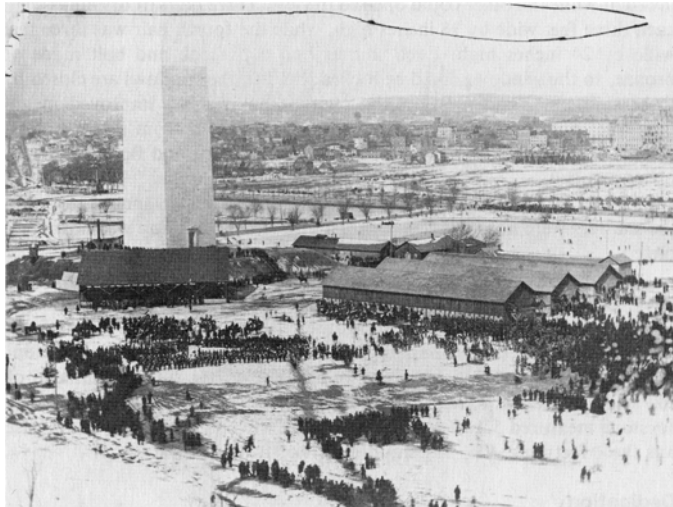


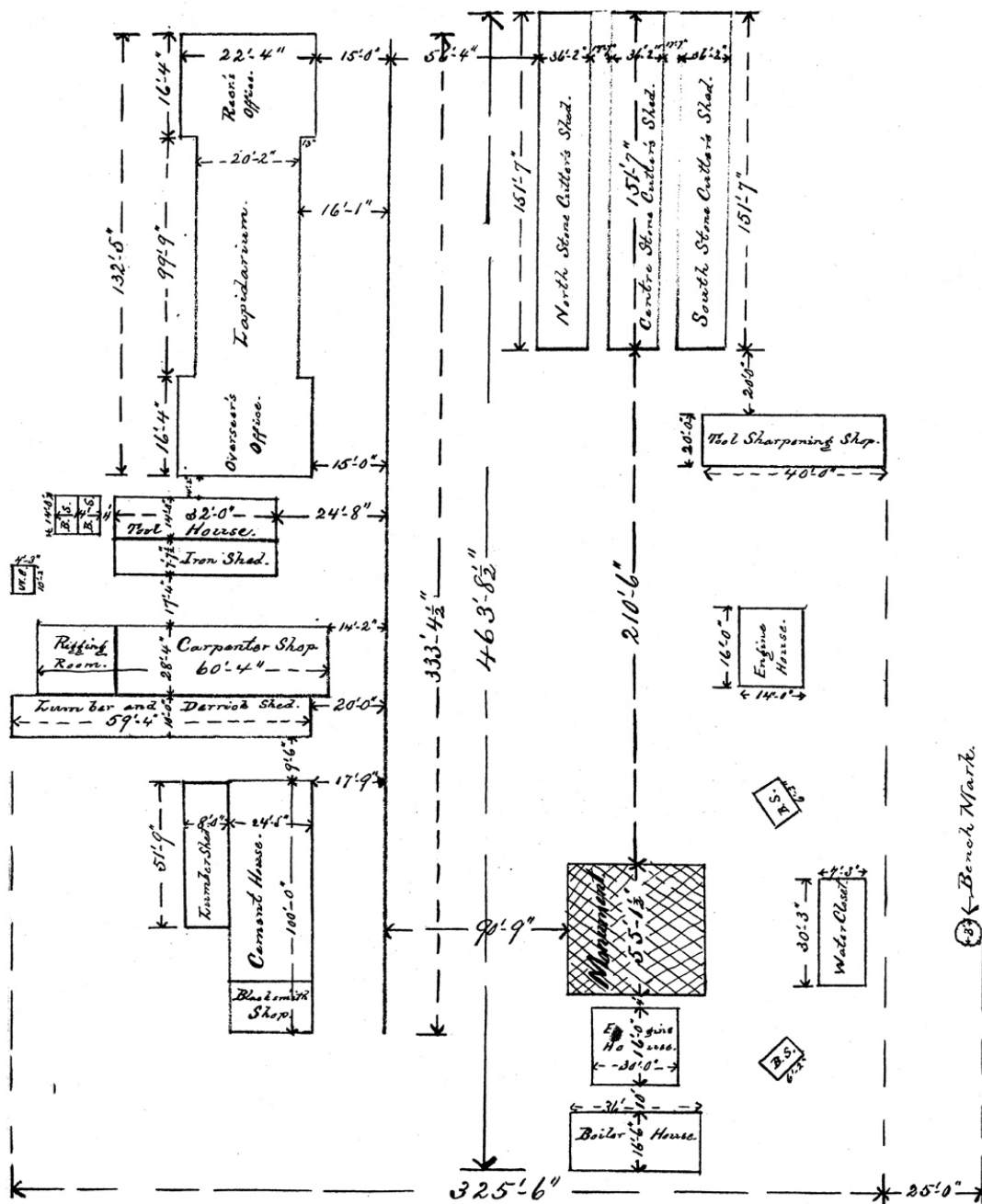
Figure 8. The Lapidarium is the farthest building on the right and barely visible. [“Dedication of the Washington Monument, February 21, 1885;” LOT 12258, LC-USZ62-89199, LOC.]

²⁵ Arkansas; Masons, Grand Lodge of Arkansas; Montana; Minnesota; Wyoming Territory; Alexandrian Library; and Addisonian Literary Society were carved in Washington (see “Catalog of the Commemorative Stones” for documentation).

²⁶ “Notified the Society that the [Charlestown] stone had been shipped on the Baltimore Packet and from Baltimore to Washington by rail;” “the block of marble sent by the Sultan of Turkey and shipped abroad the Schooner *Arctic* and which is expected to sail next Saturday,” [No primary sources available, in: Richman.] and “the dreariness trip of three months across the country was made principally by ox team.” [Ray C. Colton, “Brief History of the Deseret Stone,” in “Utah State Memorial Stone,” Proceedings held January 4, 1951, . . . Presented by Mr. Watkins, March 12, 1951, 82nd Congress, 1st Session, Senate Document No. 12.]

²⁷ *Daily Evening Transcript*, Boston, Massachusetts, February 16, 1853.

²⁸ *The American Organ*, September 5, 1856; “Location and Dimensions of Temporary Building used on Completion of the Washington Monument, Washington, D.C.,” Entry 530, RG 42, NAB; and “The Washington National Monument,” *Daily National Intelligencer*, December 2, 1865.



Location and Dimensions of Temporary Building used on Completion of the Washington Monument, Washington, D.C.

G. M. T.

Figure 9. The Lapidarium is to the northeast of the monument. [G.M.T., "Location and Dimensions of Temporary Building used on Completion of the Washington Monument, Washington, D.C.;" Entry 530, RG 42, NAB.]

B. Installation of the Commemorative Stones

1. First Period of Construction, 1850-1858

During the first period of construction, ninety-two commemorative stones were set into place as integral components of the monument walls (30-ft. to the 150-ft. levels; those set on the 150-ft. level would later be removed). An 1878 plan of the 150-ft. level shows five commemorative stones in the west wall, ranging in thickness from about 12 to 18 inches (Figure 10).²⁹

On the 30-ft. level, all stones were set flush with the wall face. From the 40-ft. to the 60-ft. levels, stones with flat surfaces and incised letters were set flush with the wall face and stones with protruding carvings or text were recessed in the wall about 1½ inches, or to the extent necessary to prevent these elements from protruding beyond the wall face. From the 70-ft. to the 140-ft. levels, all stones were recessed in the wall.³⁰ It seems that as construction progressed and the damaging effects of construction and weather were realized, the setting practice was altered to provide for the stones' better protection.

In addition to recessing the stones in the wall face, a thin sheet of lead flashing was placed within the top joint of each stone (excluding those at the 30-ft. level) that projected out over the face as further protection from rain and falling construction debris. Before the monument opened to the public, all of the flashing was cut back flush with the wall, with the exception of that on Chairman of the Building Committee;³¹ the 1974 photograph depicts flashing hanging down over the face by about one foot (Figure 11).³² Remains of flashing are

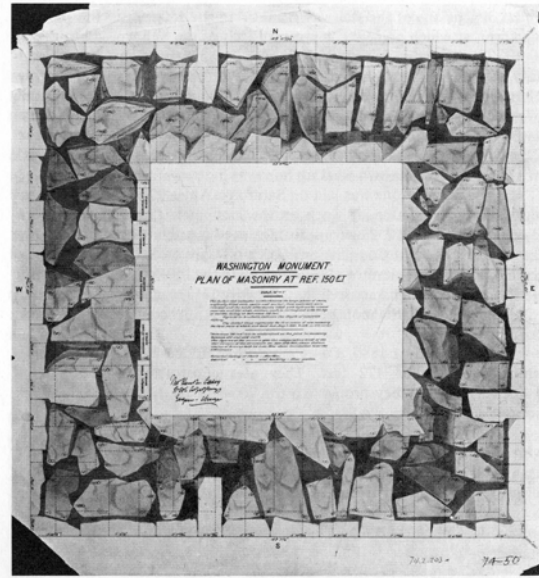


Figure 10. Section of 150-ft. level. [“Washington Monument Plan of Masonry at Ref. 150ft,” 1878; RG 79, NAB.]



Figure 11. Lead flashing covers the top third of Chairman of the Building Committee. [1974 photo.]

²⁹ American Whig Society is only about 3-inches thick; this stone is badly cracked due, in part, to its thin dimension. The fact that other stones have not cracked so badly suggests their thicker dimensions.

³⁰ North Carolina is the exception. For this stone, the carved portion of the stone is recessed and its surrounding frame was set flush with the wall surface.

³¹ Chairman of the Building Committee is located in the south wall above the stairs and impossible to access without a scaffold or rig.

³² The overhanging piece of lead flashing is no longer present.

visible in top joints of many of the stones. In these locations, flashing extends about 4 inches into the wall to either side of each stone (Figure 12). The ultimate success of the flashing is measured both by the stones that are in good condition today and by those with deteriorated surfaces (eroded, flaking, or covered with calcite crusts). For the latter stones, flashing did not function properly, was not present, or did not provide sufficient protection during the twenty-year break in construction.

The masonry units of the lower part of the monument (marble and gneiss blocks) were set with lead shims. A 1865 newspaper article reported that thin lead was used during the first years of the monument's construction; thicker lead was substituted when the original material was found to be too thin to function properly. In order for a masonry wall to evenly bear its full weight, an adequate amount of mortar is required in joints. Proper shim thickness ensures this adequate amount. In the Washington Monument, the use of thin shims resulted in uneven loading conditions which, in turn, caused the fracturing and spalling of top and bottom edges of stone blocks.³³ Uneven loading conditions also caused a number of stone blocks, including some commemorative stones, to crack down the middle, just below the vertical joint above them. Lead shims are standard use in masonry construction and it is likely that they were used for setting the commemorative stones as well as the stone blocks of the shaft.



Figure 12. Remains of flashing in joint above Masons, Grand Lodge of Ohio. Note absence of thick calcite crust on stone, to right side of stone, and beneath stone. [2000 image.]

In his 1903 report, Harvey quoted Robert Mills' description of the mortar used for the monument: "hydraulic cement and strong stone-lime, with their proper proportion of coarse, sharp sand."³⁴ Original mortar is visible throughout the interior of the lower part of the monument where there has never been any wholesale pointing campaign; this mortar is white in color with an aggregate of river sand and gravel.

2. Second Period of Construction, 1880

When construction on the monument was halted in 1858, the shaft stood at 156 feet with the top four feet having been added during the Know Nothing Party tenure. In 1880, when construction on the shaft resumed, the top six feet were removed along with eight

³³ "In dismissing this subject it is perhaps well to state the fact that the monument, so far as it has been constructed, has been done in a firm and enduring manner. . . . The lead used between the joints in the lower part of the monument was rather light, and this has caused the edges of the marble joints to spaul [sic] or scale off near the base of the structure. The joints were so close that the pressure of the weight above forced out the dry mortar, scaling off the edges of the blocks as it was crowded out. . . . The thickness of the lead was increased, and no spauling [sic] has since occurred, though there is three or four times the pressure now that existed when the spauling [sic] at the base occurred. . . ." [*Daily National Intelligencer*, December 2, 1865.]

³⁴ Harvey, p. 48.

commemorative stones at the 150-ft. level: Hawkins County; Georgia Convention; Pennsylvania; Ladies of Lowell; Cincinnati Commercial; Kentucky; Newark, New Jersey; and United American Mechanics.³⁵ These stones were reinstalled in the upper part of the monument.

3. Second Period of Construction, 1885-1889

The commemorative stones that had been removed from the 150-ft. level in 1880, and those stored in the Lapidarium since 1855, were installed in the monument after the shaft was completed. These stones were installed with three contracts, issued in 1885, 1887, and 1889.

The 1885 bid document specifies the installation of fifty-three stones from the 160-ft. level to the 210-ft. level. The 1887 bid document specifies the installation of eleven stones from the 220-ft. to the 240-ft. levels, and also Louisiana on the 40-ft. level, New York on the 160-ft. level, and Oregon on the 220-ft. level. In 1889, thirty-one stones were installed between the 250-ft. and 280-ft. levels. The specifications for the work required that the stones be sawn down to 4-to-6-inch thick panels for setting in rectangular niches cut into the wall (stones with high-relief carvings were sawn down to thicker panels).³⁶

Drawings of interior elevations specify the location of each stone with niche designations, niche dimensions, and setting information (Figure 13). Most niches are 4-to-7-inches deep; several are shallower and a few are much deeper, depending upon the thickness of the stone. Niches were carefully cut on the 160-ft. to 210-ft. levels and fit each stone perfectly. For the second two contracts, niches were not so carefully cut. These niches are frequently a poor fit for the stones and many edges have jagged arrises.

The drawings detail the setting of the stones and call for the use of lead shims (3-inch-wide pieces of sheet lead). Most stones have very thin bottom joints, indicating the use of thin—or no—shims. Oregon was set on wood shims (visible due to the stone's deterioration) and perhaps other stones were set with wood shims as well.

³⁵ A document titled "In the Shaft" lists six of these stones: Hawkins County, Georgia Convention, Pennsylvania, Ladies of Lowell, Cincinnati Commercial, and Kentucky. [Hand-written list; Entry 440, RG 42, NAB.] Gedney noted Newark, New Jersey and United American Mechanics in a sketched elevation. Several of these stones show the same deteriorated conditions of those in the lower part of the monument. Hawkins County has a vertical crack that extends down the center of the stone from top to bottom. Newark has a calcite haze on the surface and calcite crusts in crevices and on top surfaces of high-relief elements. The cream-colored limestone surface of Kentucky is dull and gray, possibly due to a calcite haze. United American Mechanics has a hole drilled into its lower right corner. This hole corresponds in size to holes drilled into the corners of the wall on the levels just below the 150-ft. level.

³⁶ Thomas Lincoln Casey, Colonel, Corps of Engineers, Engineer in Charge, "Advertisement & Specifications for Fitting and Inserting Fifty Three Presented Stones in the Interior Walls of the Washington Monument," June 25, 1885; Entry 484, RG 42, NAB; Thos. Lincoln Casey, "Washington Monument, Location of 53 Presented Stones," [n.d.]; RG 79, NAB; "Circular. Advertisement and Specifications.," Engineer Office, Washington Monument, Washington, D.C., January 15, 1887; Entry 484, RG 42, NAB; and "Annual Report of the Joint Commission for the Completion of the Washington Monument for 1886, and Director of Public Buildings and Parks, Annual Reports for 1928 (Washington, 1928), p. 42," in: Olszewski, pp. 45-46. Note: Olszewski documents the thirty-one stones to have been set between the 260-ft. and the 280-ft. levels; this is probably an error and was meant to be between the 250-ft. and the 280-ft. levels.



14

Once stones were set into place, “wrot. iron wedges” were used to secure their position. The drawings for this work show two wedges (1½ inches wide by about 2 inches long) laid one-on-top-of-the-other forming a rectangular block. A few wedges were removed from the wall during the 2000 Restoration and these were of the shape and size specified. Iron wedges were to be placed in the top joint, about 6 inches in from either side of the stone and about 1 inch back from the wall face (they were to be placed in side joints too if the stone was large). Two pairs of wedges were specified for each stone and three to four pairs for larger stones.

Wedges are visible where their rusting has caused pointing mortar to fail, the stones and wall blocks to crack or spall, and the staining of surrounding stone and mortar with iron oxide (Figure 14.). In general, stones of the first contract were set with two to three pairs of wedges. Stones installed under the second and third contracts have more wedges, especially when the niche was over cut. Stones of the second and third contracts were also set with iron spikes or feathers.³⁷ These items could have been left over from the monument’s construction and readily available on the site.



Figure 14. Rusty iron wedges in top and bottom joints, West Virginia. [2000 image.]

Cement grout was used to further secure the position of the stones once they had been set into their niches and wedged in place. This grout is visible as hardened drips on the wall beneath some stones.

A hard, dense, gray mortar (“one part Portland Cement and four parts of sharp, clean sand mixed to a very ‘short’ paste”) was used for pointing, “driven into the joint with a hammer and caulking iron and the joint then rubbed down perfectly smooth with a countersunk joint polisher.”³⁸ When a stone protruded slightly from the wall face or there was no joint to point (bottom edges), mortar sits proud of the stone surface, covering both the stone and the adjacent wall block. Pointing is well executed for stones of the first contract and is poorly executed for stones of the second and third contracts with mortar smeared on the wall and stones, uneven joints, and many mortar drops. Mortar was also used to fill chips along stone edges.

Two stones appear to have been repaired during this time, based on Gedney’s descriptions of their condition and the use of iron for the repair (no documents were found that described the work). Both stones were in poor condition in 1880. Gedney noted that American Whig Society was “badly fractured” and he drew I.O.O.F., Grand Lodge of Kentucky with a

³⁷ Iron feathers were used with plugs to split stone. A two-part plug was inserted into a hole in the stone and the feather, shaped like a spike, was pounded down into the hole, causing the plug to separate and splitting the stone in the process.

³⁸ Thomas Lincoln Casey, Colonel, Corps of Engineers, Engineer in Charge, “Advertisement & Specifications for Fitting and Inserting Fifty Three Presented Stones in the Interior Walls of the Washington Monument,” June 25, 1885; Entry 484, RG 42, NAB.

horizontal fracture across its face. These conditions were repaired with iron wedges and iron cramps respectively. Iron wedges were inserted into the top and bottom joints of American Whig Society to prevent the center portion of the cracked stone from falling out. I.O.O.F., Grand Lodge of Kentucky was stabilized with iron cramps, visible on the right side where the stone has spalled. One cramp extends from the top to the bottom and holds the two pieces together; part of another cramp is visible but its configuration could not be determined.

4. Later Installations, 1913-2000

In 1911, prompted by the fact that many western states were not represented in the monument, the Washington National Monument Society sent letters to these states requesting stones and providing instructions on size and guidelines for appearance (Figure 15). Between 1913 and 1928, Oklahoma, Colorado, Texas, South Dakota, Washington, Arizona, New Mexico, North Dakota, and Idaho sent stones that were installed between the 290-ft. and 400-ft. levels.

A stone from Hawaii was sent in 1935. The stone from Alaska, set at the 450-ft. level in 1982, is the upper-most stone in the monument. In 1951, Utah sent a stone for placement beneath the stone representing the Land of Deseret (Utah's pre-territory and pre-statehood name). Connecticut and Florida each replaced their original badly deteriorated stones in 1914 and c.1968 respectively.

A Roma Americae was commissioned by Father James Grant, of Spokane, Washington, as a replacement for the stolen Pope's Stone (stolen from the Lapidarium by individuals from the Know Nothing Party in 1854). This was installed at the 340-ft. level in 1982. A stone that had been sent from Okinawa in 1854 never reached Washington; when the Ryukyu Society discovered this loss, they sent a replacement stone in 1989 that was installed at the 310-ft. level.

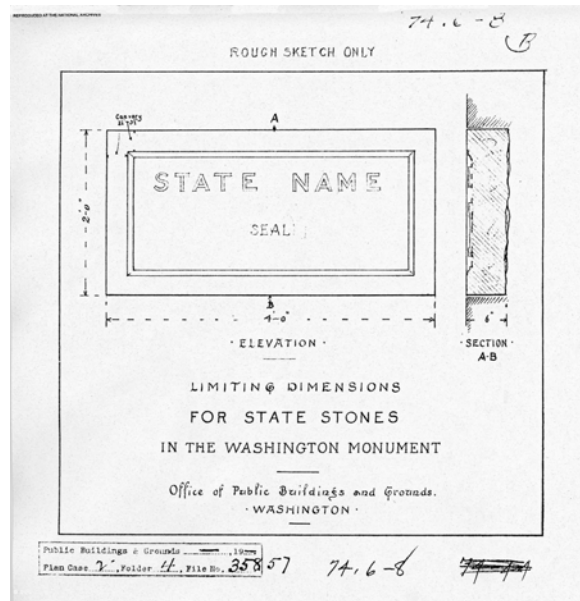


Figure 15. Guidelines for new stones. [Office of Public Buildings and Grounds, Washington, "Limiting Dimensions for State Stones in the Washington Monument," n.d.; RG 42, NAB.]



Figure 16. Setting Carthage, Joe Sieiro and Jose Jovel, Lorton Contracting Company, February 22, 2000. [2000 image]

In 1951, Carthago was found in the bottom of the elevator shaft and subsequently placed on a ledge at the 500-ft. level for display. On February 22, 2000, the 268th anniversary of George Washington's birth, this stone was set into the monument at the 380-ft. level (Figure 16).

III. Recommendations for Further Research

Further research would add greatly to this information in this report. Suggestions for this further research are outlined below.

- Continued research in libraries and archives with known collections or sources of information (see Louis Torres' bibliography).
- Systematic perusal of Washington, DC newspapers, primarily from 1849 to 1855 and from 1878 to 1888.
- Systematic perusal of all newspapers, primarily from 1849 to 1855 and from 1878 to 1888. Reports of the construction of the Washington Monument appeared in newspapers across the country and many of these reports mention the commemorative stones. Web-based search engines and digital libraries will facilitate this perusal.
- Research in state and local libraries and archives for information on individual stones.
- Perusal of all construction documents and daily logs in both the National Archives and the Society for the Preservation of New England Antiquities in Boston.
- Perusal of the National Capital Region's Museum Resource Center collection.

The research carried out for this project focused on the fabrication and materials history of the commemorative stones and the history of their installation and condition within the monument. Clearly, there are other aspects of their history that would benefit from research. Human-interest stories are associated with each stone and include information on donors and unveiling ceremonies. Art history topics include information on carvers, workshops of carvers, and iconography of stones. More broadly, there are stories regarding American history and patriotism, the history of stone working and economic geology, the life of George Washington, the Revolutionary and Civil Wars, societies and fraternal organizations, foreign relations, and the history of commemoration. Even the smallest research projects will aid tremendously in the interpretation of the commemorative stones.

IV. Catalog of the Commemorative Stones

This catalog of the commemorative stones contains basic descriptive information and a photograph for each stone, the latter following the conservation treatments carried out for the 2000 Restoration. The material history is presented as transcriptions of documents found during the course of research. Many of the documents examined were newspaper clippings or photocopies of clippings; citations were often brief or without source or date. Obtaining full citations was not carried out for this project. A list of abbreviations used in this catalog is found in Appendix A.

Explanation of entries:

Name: a brief name is given for each stone. The name is either the entire inscription of the stone (e.g., Maine), an abbreviated inscription (e.g., Fort Greene), or the name (or abbreviated name) of the donor (e.g., I.O.O.F., Germantown, Pennsylvania).

Donor: the state, foreign country, organization, company, or individual that donated the stone.

Dates: two or three dates are given for each stone. The first date is that carved on the stone or recorded in a document, and represents the date that the stone was carved. A date of 1850s is given when no written documentation exists and the stone is in the lower part of the monument, or if the stone is documented as having been on the site in the 1850s and is now in the upper part of the monument. The second date, for stones that have two dates, is that of installation. A date of 1850s is given if the actual date of installation is not known and the stone is in the lower part of the monument. The second date, for stones that have three dates, is the first date of installation; the third date is the second date of installation (the stone having either been removed from the 150-ft. level or removed for repair). If the source of a date is not given in the "Documented material history" section, then the date is either derived from the stone, its place in the monument (above or below the 150-ft. level), or the contracts that were issued for the installation of stones during the second period of construction.

Original material(s): stones are identified in general terms, the primary materials being marble, sandstone, limestone, and granite. Differentiations between marble and partially metamorphosed limestone, and granite and igneous stones that look like granite, for example, were not made for this catalog. When a stone could not be readily identified, it is noted as such. Some materials are known to exist but are not visible (e.g., adhesives and pins); these materials are identified only if deterioration or probing makes them visible. Some inscriptions were originally gilt or painted; these materials are identified if they were either still in evidence at the start of this project or are described in a document.

Dimensions: the vertical dimension precedes the horizontal dimension. Dimensions are rounded off to the nearest inch.

Sculptor/Carver: the name (and location) is taken from the stone or from documents. Differentiations between sculptor, carver, or designer were not made for this catalog except when such information is given on the stone or in a document. If the source of the sculptor/carver is not given in the “Documented material history” section, then the name was found on the stone.

Original inscription: no attempt was made to document capital and small letters, different styles of letters, and word placement on the stone. In many cases, the inscription is abbreviated.

Translation of text: translations for inscriptions in foreign languages are given, along with a citation for the translation. Latin and Greek text on American stones is not translated.

Documented material history: this information is transcribed from a variety of sources and focuses on the pre-1950s history.

Images: a selected list of images (primarily drawings and photographs) is given for each stone. Full citations for image collections are found in Appendix A.